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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,732	03/05/2002	Yoshiyasu Horiuchi	K-2038	6992

7590 10/27/2003

KANESAKA AND TAKEUCHI  
1423 Powhatan Street  
Alexandria, VA 22314

EXAMINER

KUHNS, ALLAN R

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 10/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/081,732

Applicant(s)

HORIUCHI ET AL.

Examiner

KUHN

Group Art Unit

1732

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE THREE (3) MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- ☐ Responsive to communication(s) filed on \_\_\_\_\_.
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

- ☒ Claim(s) 1-8 is/are pending in the application.
- Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1-8 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement

### Application Papers

- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some\* ☐ None of the:
  - ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

### Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other \_\_\_\_\_

Office Action Summary

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1.The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2.Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elfving et al. Elfving et al. teach or suggest the basic claimed method for manufacturing a synthetic resin molding using thermal expansion microcapsules or microspheres wherein the microcapsules are mixed with a base resin and the mixture undergoes resin molding in a mold, and wherein the thermal expansion microcapsules are mixed with a resin and the microcapsules are not expanded (note the disclosure of forming a masterbatch at column 4, lines 17-26 with the additional disclosure that the microcapsules are still expandable and thus not expanded after the masterbatch is formed). Elfving et al. also teach that the mixture of microcapsules and resin is then mixed with the base resin and that mixture then undergoes resin molding. Elfving et al. appear not to explicitly teach the existence of a temperature condition under which the microcapsules are not expanded, but maintaining such a condition would have been obvious to one of ordinary skill in the art in order to prevent the microcapsules from expanding prematurely.

With regard to claim 2, an appropriate temperature range would have been readily determined through routine experimentation by one of ordinary skill in the art in order to avoid premature expansion of the microcapsules. Elfving et al. teach or suggest a particle size within the range of claim 3 at column 3, lines 61-67. Elfving et al.

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teach the use of additives, as in claims 4-5, at column 3, lines 35-53, and teach or suggest the use of an olefin resin, as in claim 6, at column 4, lines 43-46. Elfving et al. teach the use of injection molding, as in claim 7, and suggest using an open port of a screw for introducing the microcapsules in the example. Use of recycle resin, as in claim 8, is well known and such would have been obvious to one of ordinary skill in the art in order to reduce raw material costs.

3.The use of the term "given" in several of the claims appears to be superfluous.

4.Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allan Kuhns whose telephone number is 703-308-3462. The examiner can normally be reached on Monday to Thursday from 7:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni, can be reached on (703) 305-5493. The fax phone number for the organization where this application or proceeding is assigned is 703 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

*Allan R. Kuhns*  
ALLAN R. KUHNS  
PRIMARY EXAMINER AU 1732  
10-21-03